

# **SCALE OF ATTITUDES TOWARDS THE TERM OF FREE, PRIOR AND INFORMED CONSENT (FPIC) AND THE HUMANIZATION PROCESS ON MEDICAL FIELD**

***Angela Maria Moreira Canuto, PhD Candidate, Assistant Prof.***

***Arthur Correia Souza Santos, Academic in Medicine***

***Dyego Taffarel Rosendo de Barros, Academic in Medicine***

School of Medicine, Federal University of Alagoas, Brazil

***Jorge Artur Pecanha de Miranda Coelho***

PhD in Psychology, Adjunct Prof.

***Gustavo Henrique Silva de Souza,***

Master Student of Psychology Laboratory of Evaluation and Measure Cognitive-Emotional (LAMCE/CNPq), Federal University of Alagoas, Brazil

***Rui Manoel Lopes Nunes,***

PhD in Medicine/Bioethics, Full Prof. University of Porto, Portugal

---

## **Abstract**

The objectives of the following article is to develop and verify the factorial validity and the internal consistency of the Scale of Attitudes toward the Term of Free, Prior and Informed Consent (FPIC) and the Humanization Process on Medical field, based on the Theory of Planned Behaviour. The study started from an analysis of the key concepts of humanization for the purpose of giving theoretical support to the empirical research. So, for the validation process of the instrument developed, it counted with the participation of 164 Brazilian medical students [61% female], with aged 19 to 34 years old ( $M=22.58$ ,  $SD=2.27$ ). Thus, were proceeded the Exploratory Factor Analysis and the Cronbach's alpha test. The results confirmed that this scale of 14 items make an one-dimensional measure which reliably predicts Attitudes, Subjective Norms, Perceived of Control and Behavioural Intention in relation to the FPIC and the humanization process. Theoretical and empirical implications of the results are discussed about the instrument developed. Thereto, it was possible to identify the total scores for each one of the components, to create an instrument that can be used to find behavioural patterns between groups, and verifying the relationship between variables through the correlation and the

level of explanation of the antecedent variables as the consequential variables.

---

**Keywords:** Scale, Humanization, Attitudes, FPIC, Ethics, Medicine

## **Introduction**

Currently, the humanization has been one of the most discussed topics in the medical literature and in the health programs of several countries, in which many issues are raised, however, there no convincing answers. So, what should be a natural process – the human by its nature be humanized – becomes a research object of the postmodern medicine.

Commonly, the humanization has been confused with empathy, which is actually a misconception, since the humanization is a more complex concept and is related to human behaviour. For example, in the past, the doctors had to show their competence through direct and univocal contact with the patient. On the other hand, the modern medicine is organized to offer the healing using a complex system which involving multiple agents, and which the direct contact with the patient becomes more important than the system functionality (Trabucchi, 2006).

Specifically in Brazil, as an example of this change in the scope of medicine, in 1988 the Brazilian Constitution (Brazil, 1988) was modified for the approval of the Unified Health System (SUS, in Portuguese), which recognizes the right to universal access to health for the entire population. However, SUS, even a poor system, indicates a number of complexities. Therefore, the following question arises: the vogue of humanization would be just a demagogic movement that aim simplifying the conflicts and structural problems of SUS? Or reflect a real trend of the Unified Health System to devalue the human being? The answer is that probably the two things are happening. No doubt there is a bureaucratization process and in many cases even the coarsening of interpersonal relationships in the SUS, whether being relationships between professionals or between professionals and patients (Campos, 2006).

The high changes was worldwide, and started from the need to transform the medical courses which still followed the Abraham Flexner's Cartesian model. Indeed, the high advancement of technology in the twentieth century, mainly in the second half, made the belief in machinery overpower a careful anamnesis and a competent clinical examination. However, the demands of society confirmed that a transformation in the teaching model of most medical schools would be required (Campos, 2006).

In Brazil was no different. The Curriculum Guidelines for Undergraduate Courses of Medicine recommends that the medical egress must have the following profile: generalist, humanist, critical and reflective.

Able to work, follow the ethical principles in health-disease process at different levels of care, with actions of promotion, prevention, recovery and rehabilitation to health under the perspective of comprehensive care, with a sense of social responsibility and commitment to the citizenship, as a promoter of health human (Brasil, 2001).

As a transversal theme that permeates the practices and concepts in health, the humanization is taken as a strategy to transform the realities and its agents, and these when mobilized and engaged in social practices, end up also transform themselves (Benevides, 2005).

In this sense, the humanization process in the health system attempts to revive the respect for life, including the bio-psychosocial, spiritual and educational circumstances. To this, considering the respect for individuality and professional differences as well as the necessity of building a concrete space in health institutions which legitimizes the human aspect of all involved in the system (Bazon, Campnelli & Assis, 2004).

In turn, many countries worldwide have invested in targeted policies for humanistic methodologies in making of practical decisions due to growing ethical problems. Since 1995 most of the initiatives to humanistic methodologies had a dual focus: wellness and effective care in health. However, even if these practices are compatible with the humanist view, the most objectives currently are led primarily by economic needs, in which the concepts of autonomy, patient responsibility and health of consumer are being used to pressure the people to meet to the political and economic expectations and mandatory demands (Deccache & Ballekon, 2010).

Therefore, this article is aimed to develop and verify the factorial validity and internal consistency of the Scale of Attitudes toward the Term of Free, Prior and Informed Consent (FPIC) and the Humanization Process on Medical field, based on the Theory of Planned Behaviour. In this format has been inserted other predictor element – beyond behavioural beliefs and normative beliefs –, the control beliefs, that is, the presence of factors that may facilitate or impede the behavioural performance. More specifically, they relate to the perceived control over the behavior (perceived behavioral control), which refers to the beliefs of the person about the easy/difficult step to perform a certain action, i.e., the perception that an individual has to can perform a desired behavior (Ajzen, 1985; Ajzen & Madden, 1986; Ajzen, 1991; Davis et al., 2002; Bamberg, Ajzen & Schmidt, 2003).

Also, the inclusion of perceived control is based on the assumption that a higher sense of control corresponds to a higher likelihood that the performance behaviour has success. Thus, the human action according to the Theory of Planned Behaviour, can be influenced by behavioural, normative and control beliefs (Ajzen & Fishbein, 2000). In this sense, the Theory of Planned Behaviour seeks to supplement the Theory of Reasoned Action,

which is specific to procedures under the control of the will of the individual, through the possibility of changing those behaviours that are beyond personal control and of using the ability of behavioural prediction by inclusion of the concept of perceived behavioural control (Rye, Fisher & Fisher, 2001).

## **ATTITUDES**

The personal efforts to deal with the real world demonstrate the need for a more flexible concept than the usual, more directly related to the objectives and social situations than personality traits, more specific than the values, more directive than beliefs and more abstracted than the standards of reason (Rokeach, 1981). In this regard, the concept of attitudes has been the subject of special consideration for this particular approach. Thus, the following sections present the definition, structure, functions and measurement of attitudes.

### **Definition of Attitudes**

Due to the importance of the topic, it is not surprising that there are many conceptual propositions for Attitudes. According to Thomas and Znaniecki (1918), attitudes correspond to a process of individual consciousness which determines real or possible activities of the individual in the social world. Cantril (1934) conceives it as a state of readiness (dispositional) more or less permanent of mental organization in which predisposes the individual to react in a characteristic way toward some object or situation. Allport (1935), in turn, defines attitude as a mental and neural state of readiness (dispositional), organized by the experience, exerting a directive or dynamic influence on individual responses for all objects and situations which it is related. Rosenberg and Hovland (1960) define attitude as a predisposition to respond to any stimulus with a certain kind of feedbacks. Petty and Cacioppo (1996) refer to attitudes as a general and enduring positive or negative feeling about some person, object or subject. However, it is generally agreed that the most characteristic component of attitudes is the affective. In this sense, Albarracin et al. (2005) emphasize that Eagly and Chaiken (1993, 1998) present which may be the most conventional and contemporary setting; specifically, an attitude is understood as a psychological tendency that is expressed by evaluating of a particular entity with some degree of favorability or desfavorabilidade (Eagly & Chaiken, 1998, p. 269). That is, attitudes are conceived as likely to respond favorably or unfavorably to an object, event or situation (Eagly & Chaiken, 1993, 1998).

## **Structure of Attitudes**

In this regard, it is perceived in the literature a lack of consensus about the dimensionality of attitudes. Rosenberg and Hovland (1960) consider the attitudes as reflecting a three-dimensional structure which consisting of affective components (favorable or unfavorable feelings), cognitive (beliefs or opinions) and behavioural (intentions of conduct or expressed shares). Others authors (e.g., Zajonc & Markus, 1982) consider only the cognitive and affective components, i.e., attitudes as two-dimensional. However, the most popular is the one-dimensional structure proposed by Eagly and Chaiken (1993), which takes into account the affective component as central.

In this sense, contemporary theorists report that cognition, affect and prior behaviour are, in fact, the basis from which to derive assessments, rather than being attitudinal components (Fabrigar, MacDonald & Wegener, 2005). In other words, attitudes are favorable or unfavorable evaluations based on beliefs, feelings and/or prior behaviors (Tesser & Shaffer, 1990; Albarracín et al., 2005; Fabrigar, MacDonald & Wegener, 2005). So, for this article, as described above, we consider the attitude as a psychological tendency to respond favorably or unfavorably to an object, event or situation, in particular to the FPIC and the Humanization in the doctor-patient relationship.

## **Functions of Attitudes**

The classic descriptions of the functions of attitudes were provided by Smith, Bruner and White (1956) and Katz (1960), the first to explicitly recognize the positive functions of the attitudes. Smith, Bruner and White (1956) suggested three functions for attitudes: evaluation, social adjustment and externalization. The evaluation refers to the role played by attitudes to simplify the understanding of the positive and negative attributes of the environment objects. The social adjustment indicates that the attitudes assist the individuals to differentiate people who he likes, that is, facilitate the maintaining relationships with others. And, the externalization is accomplished by attitudes that defend the person against its internal conflicts.

Katz (1960) proposed four functions for the attitudes, which somehow overlap with those proposed by Smith, Bruner and White (1956), namely: (1) utilitarian or instrumental function, which allows the individual evaluate the cost and benefit of the attitude, opting by the attitude which will get better social adjustment, maximizing the social rewards and minimizing the punishments; (2) protective function of the “ego”, which enables the individual to protect themselves against internal and external conflicts, and preserve their image and self-esteem; (3) function of expressive value, in

which the individual derives satisfaction in expressing appropriate attitudes to their personal values and their self-concept [for example, equality and freedom] (Maio & Olson, 1995; Rokeach, 1973; Schwartz, 1992); and, (4) function of knowledge, which postulates that the attitudes facilitate the management and simplification of information processing by providing a framework which integrates the existing information with the new information.

More recently, Herek (1986) systematized the functions of attitudes into two broad categories: instrumental or evaluative functions and symbolic or expressive functions. The first relates to an evaluation of costs and benefits of attitude, making the individual choosing the attitude that allows him to get the best social adjustment, maximizing the social rewards and minimizing the punishments. The expressive functions are related to the use of attitudes as a way to pass the values or the individual's identity, preventing internal or external conflicts, and preserving the self image.

In summary, the attitudes serve to: (1) allow people to obtain rewards and avoidance of punishment, (2) protect the self-esteem and avoid the anxiety and conflict, (3) assist in the planning and assimilation of complex information; (4) enable the reflection on the beliefs and values, and (5) establish the social identity (Rodrigues, Assmar & Jablonski, 2000).

### **Measures of Attitudes**

The measurement of attitudes is very widespread. Social psychologists often measure attitudes when studying its causes and its impact on cognitions and behaviors. Attitudinal measures are also used by many professionals such as political scientists, sociologists and economists. For example, in the area of marketing commercial, researchers use the measure of attitudes to verify the intention of buying products and the adoption of technologies and services (Krosnick, Judd & Wittenbrink, 2005).

Due to the attitudes comprise a latent construct, its measurement has axiomatic implications or implications of representation and psychometric, as with so many others constructs in the field of Social Psychology. In this sense, the attitudes are not measured directly but can be inferred from stated or implied answers (Krosnick, Judd & Wittenbrink, 2005). The most common way of measuring the attitudes is by the scales of attitudes (techniques of pencil and paper). It consists in measuring the attitudes through the evaluation that people make about a particular object, event or situation. The most direct way to access this content is the self-description of the individual placement. Recently, the techniques of attitudes measurement most widely used can be categorized as the Traditional Method of Direct Self-Report and Method of Implicit Measurement (Krosnick, Judd & Wittenbrink, 2005), described below.

*Traditional Method of Direct Self-Report.* As was mentioned before, the most common way of measuring attitudes is by the scales of attitudes. Basically consist of questionnaires that ask to the respondents to indicate their own attitudes, through self-description of the individual placement. Therefore, this technique is classified as an explicit measurement. This procedure is used to access clear and declared attitudes, having the following main techniques:

(1) *The scale of constant intervals Thurstone's.* It consists of a technique called “focused in the stimulus”, and characterizes the attitude of the individual through its positioning in front of the stimulus previously quoted. The measurement model which is in the bases is the psychophysical, that is, the relationship between the attributes of the physical world and the psychological feelings that they produce (Lima, 2002). For example, the “Scale of Attitudes towards Church” developed by Thurstone and Key (Lima, 2002). This is an unusual technique currently used.

(2) *The Likert technique whose procedure is focusing on respondents.* This is a type of psychometric measurement. It is the individual's own response that punctuates his behaviour directly in attitude terms and there is no scaling of stimuli, a priori (Lima, 2002). For example, the “Environmental Attitudes Inventory” developed by Milfont (2007). One can say that the technique is more widely used today.

(3) *The technique of Osgood, Suci and Tannenbaum (1957).* This technique assumes that the meaning of each word is a point in a semantic space (there is N dimensions in a Euclidean space), defined by bipolar dimensions (antagonistic adjectives). These bipolar scales are used with a 7-point scale, from -3 to +3 (Lima, 2002). For example, the “Scale Attitude towards Tattoo” developed by Medeiros et al. (2010).

(4) *The Guttman's Scales or Cumulative Scales.* This kind of scales presupposes that the subject position can be located on a continuum. The items of a scale of attitudes are like the Russian dolls, that is, with the acceptance of an item of the scale, there is also the acceptance of all their inferior levels (Lima, 2002). For example, the “Scale of Social Distance” developed by Bogardus (1933).

Advances in the theoretical and empirical field indicate that for optimizing of the measurement of attitudes by the traditional method of direct self-report should use the Likert's technique. Also, Krosnick, Judd and Wittenbrink (2005) suggest that the data quality improves when it makes use of 7-point scales and indicating a label for each one of the seven points of the scale [for a theoretical review with more details, see Krosnick, Judd and Wittenbrink (2005)]. However, some problems have been encountered with regard to the method of direct self-report. It is questionable, for example, if the individual's response corresponds to your real attitude or if he tried to

give a good image of them to please the researcher. A more specific term for this phenomenon is “social desirability”, which is used to represent distortion trends of self-reports to a favorable direction, thus denying traits and behaviours socially undesirable (Furnham, 1986). This term has been commonly used to refer to the characteristics of items of a psychological test (Crowne & Marlowe, 1960), in which the research participant conceals his real answer to respond in a socially acceptable or desirable way (Schultz, 2001). Therefore, it would be a tendency the responses which make the individual profile are presented positively (Paulhus, 1991), constituting thus an undesirable component of the measure of attitudes.

Thus, the method of implicit measurement seems alleviate some of the problems in relation to the method of direct self-report. So, following the description of some techniques that can be used in this particular method.

*Method of Implicit Measurement.* The body is often a truer rapporteur of feelings. Thus, psycho-physiologists developed three evaluation techniques of attitudes by means of body signals, namely: manifested natural responses, hidden and conditional responses and the false psycho-physiological responses (Lima, 2002):

(1) *Obvious natural responses pertain to nonverbal behaviour.* The attitudes are inferred from postural signs or facial expressions of the actors. Postural signs – interpersonal attitudes – are the distance that lie two actors and the positive attitude that they manifest (Mehrabian, 1968), but, it presents negative implications because when people know that are being observed they may distort (Lima, 2002).

(2) *Hidden natural responses are bodily changes – physiological.* Hardly, they are observable to "naked eye" and are not within reach of voluntary control. For example, the galvanic skin response (GSR). Mehrabian (1968), in the early twentieth century, showed the modification of GSR in people confronted with verbal stimulus with emotional charge, as a “prostitute”. The difficulty of this technique is that it depends of the autonomic nervous system and can not be an indicator of attitude, but only a more general reaction against the new stimulus, unexpected or that requires attention. Another physiological response associated to the attitudes is the pupillary reaction, i.e., the increase or decrease in pupil size. As dilation is controlled by the sympathetic nervous system and the contraction by the parasympathetic nervous system, also allows for a bidirectional physiological attitudinal response. The pupillary response may be influenced by other types of situations, such as fatigue, stress and mental effort (Lima, 2002).

(3) *Physiological indicator of attitudes can be the facial electromyographic activity.* This indicator concerns to the contraction of muscle fibers evaluated by the change in electrical potential that

accompanies them. The relevant muscles to evaluation of attitudes would be those which determining the facial expressions according to the hypothesis of facial feedback from Tomkins, namely: corrugator (moves the eyebrows up and down), zygotic (move the corners of the mouth up and down) and depressor (moves the chin, opens the concavity of the mouth). This kind of response seems to be more useful than previous in the detection of attitudes, because unlike other indicators, this does not depends of the autonomic nervous system, but depends of the central nervous system, demonstrating free from the contamination by other symptoms of attention and, on the other hand, provides a clear differentiation of the positive emotions compared to the negative emotions (Lima, 2002). According to Lima (2002), the corporal measurement of attitude, although it seems a fascinating field of research, it has not produced important techniques and results, as previously thought. Notably, this has been due to the difficulty of univocal interpretation of the psycho-physiological responses of individuals and due to the practical implications of access to the equipment necessary to the record of the responses.

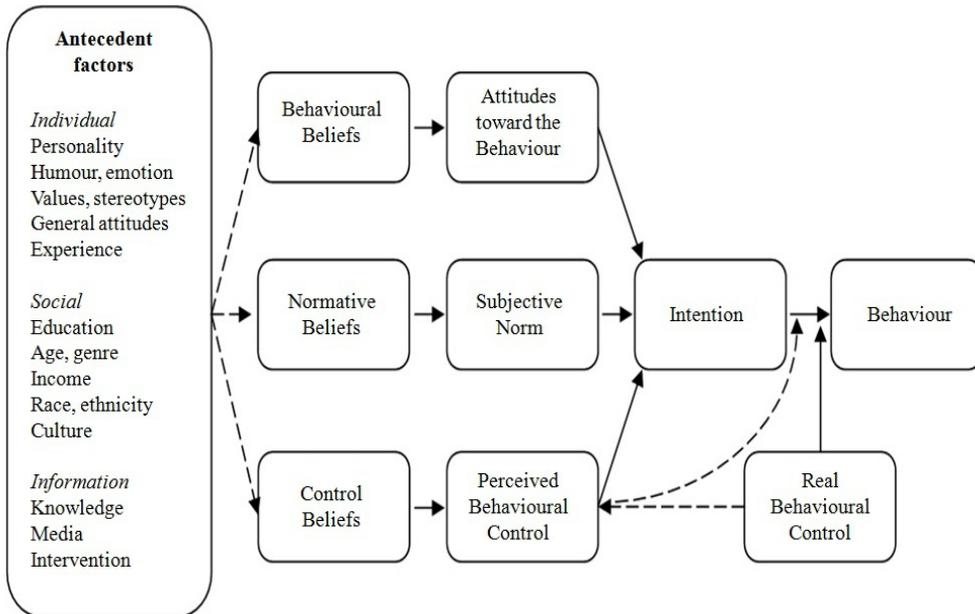
Another kind of measure of attitudes refers to the evaluation of behaviours. This technique makes it possible to overcome the lack of sincerity that is found in self-report measures and produces observations in natural format, impossible to be performed with the techniques of corporal measurements. One of the most important techniques in this context refers to the observations of the telltale behaviours attitudes, but these are observations that pass completely unnoticed by individuals. These measures, also known as non-obstructive measures, were often used in researches in the 1960s in Social Psychology, for example, in famous study developed by Milgram, Mann and Hartner (1965), which evaluate the political attitudes of citizens from different parts an American city, leaving the floor as lost, sealed letters addressed to various political groupings. Through the number of letters addressed to each entity that was received in a rented place by the researchers, it was possible to draw a map of political attitudes. Lima (2002) highlights that this lost letter technique continues to be used as a unique methodology in assessing of attitudes about controversial issues, such as the study of Kuntz and Fernquist (1989) which used a variation of this technique, leaving in public places several postcards addressed to organizations for and against the abortion, in which was announced the decision to contribute to the cause.

According to Krosnick, Judd and Wittenbrink (2005), between the new types of measures of attitudes, it is worth mentioning the so-called implicit measures which have received more attention because they are based on latent responses. These measures attempt to determine the activation of attitudes from the impact of the attitudinal object on the speed with which

the individual can make certain judgments. These measures fall into two general categories: (1) Measure based on sequential procedures of priming (involves the creation of a context-stimulus that produces a particular kind of response or effect) and (2) Measure based in using of responses to concurrent tasks, such as the *Implicit Association Teste (IAT)*, developed by Greenwald and Banaji (1995) [for more details, see Greenwald, McGhee & Schwartz (1998)]. The Implicit Association Test (Greenwald, McGhee & Schwartz, 1998) is a technique that allows analysing implicit attitudes through association of a particular concept or target-category with the attribute dimensions.

It is important to highlight that these ways of measuring attitudes are valued for being more “pure”, i.e., closer to reality. However, one should not fail to take into account that these measurement forms of attitudes are not free of obliquities, but just present different obliquities and fewer in number than the techniques of self-report (Lima, 2002).

Ajzen and Fishbein (1985) were interested in studying the relationship between attitudes and behaviour. For these authors, the behaviour is determined by the intention of running it (this in particular, concrete pro-environmental behaviour). The attitude-behavior relationship is not direct, because to Ajzen and Fishbein (1985) the “attitudes” affect the “behaviour” indirectly through a factor called “Behavioral Intention”. Moreover, the “Behavioral Intention” is influenced by the “Subjective Norm” with regard to the perceptions that others important people to the individual (e.g., friends, family, colleagues or neighbor) have on which he should or should not do. That is, the perception of what other people expect that the individual do and their motivation to comply and correspond to this expectation. For predict behavioural intentions of someone is crucial knowing these perceptions, according to Fishbein and Ajzen (1985). Ajzen (1991) includes in this model a fifth factor called “Perceived Behavioral Control”, which consists of beliefs about the control that the individual has of the factors that may hinder or facilitate the behaviour. This perceived control directly affects the behavioral intention, together with the attitudes and subjective norms, as well as the behaviour (Ajzen, 1991; Ajzen & Fishbein, 2005; Madden, Ellen & Ajzen, 1992). The comparison made by Madden, Ellen and Ajzen (1992) between the *Theories of Reasoned Action and Planned Behaviour* indicates that the inclusion of the fifth factor “Perceived Behavioural Control” significantly increases the prediction of the behavioural intention and the behaviour. Figure 1 shows a graphical representation of the *Theories of Reasoned Action and Planned Behaviour*.



**Figure 1.** Diagram of the Theories of Reasoned Action and Planned Behaviour. Adapted from Ajzen and Fishbein (2005, p. 194).

Between the cognitive models for predicting pro-environmental behaviour, this particular one has the specific feature sets as the relationship between the internal factors (cognitive) and usual behaviour itself, observable (Corral-Verdugo, 2001), which emphasizes reasons of personal interest for deal with environmental issues (Bamberg & Möser, 2007).

## METHODS

This study presents evidence about the psychometric parameters of the proposed measure (Scale of Attitudes toward the Term of Free, Prior and Informed Consent (FPIC) and the Humanization Process on Medical field), as the factorial validity and the internal consistency. Thus, we counted with the literature review and the researcher's intuition as a source to build the items to compose the psychometric instrument based on the Theory of Planned Behaviour.

In a first step was performed the analysis of the items. These underwent to two evaluations:

**(a) Analysis from Judges** – the analysis from judges or analysis of construct was performed by one expert in psychometrics and two medical students who indicated if the behavioural representation of the item refers to the proposed latent trait. This, were presented to the judges the constitutive definitions of the constructs: Attitude, Subjective Norm, Perceived of Control and Behavioral Intention. Then, the judges were required to indicate

the association between the item and its respective construct which most represent it. An agreement of at least 80% between the judges was adopted as a decision criterion about the permanence of the item (Pasquali, 2010).

**(b) Semantic Analysis of the Items** – the semantic analysis sought to verify if the items are intelligible to the lowest stratum of the population goal, verifying if they were built to expressing the behavior clearly and without a doubt interpretation, and was also verified if items were not ungainly form (Pasquali, 2010). For this step was counted with a sample of 10 medical students from the first year of medicine course of Federal University of Alagoas, of both sexes.

After this, it was possible to have the trial version of the instrument and submit it to empirical test to verify the factorial validity and internal consistency.

### Participants

The research counted with the participation of 164 Brazilian students of Medicine from Federal University of Alagoas, in which 100 (61%) were female and 64 (39%) males, aged 19 to 34 years (M = 22.58; SD = 2.27). Most are single (96.9%, f = 158), is attending the 3rd year (32.3%, f = 52) and 4th year (37.3%, f = 60) – (Minimum = 2 years; Maximum = 9; M = 3.67; SD = 1.01), and is not in a boarding (80.7%, M = 130). The sampling procedure used was non-probabilistic, i.e., by convenience, involving those people who, invited, accept voluntarily collaborate.

### Instrument

*Scale of Attitudes toward the Term of Free, Prior and Informed Consent (FPIC) and the Humanization Process on Medical field.* It consists of 20 items that measure the following factors:

- (1) *Attitude* (5 items). Respondents were asked to: “Following, evaluate the items thinking of how **the doctors think and act on his performance**. Use the seven-point scale ranging from “**Poor**” = 1 to “**Good**” = 7”. For example:

To believe that the FPIC serves to guarantee the rights of the patient in researches seems:								
Poor	1	2	3	4	5	6	7	Good
To consider that the FPIC serves to guarantee the rights of the patient in procedures (e.g., hospitalization) is:								
Poor	1	2	3	4	5	6	7	Good

- (2) *Subjective Norms* (5 items). Respondents were asked to: “Following, evaluate the items thinking in **you as a student of medicine**. Use the seven-point scale ranging from “**Improbable**” = 1 to “**Probable**” = 7”. For example:

The important people for me (friends, colleagues) approve that are needed changes in the medical education to improve the doctor-patient relationship.								
Improbable	1	2	3	4	5	6	7	Probable
The important people for me (friends, colleagues) approve that are needed changes in the courses of medicine to improve the understanding and use of FPIC.								
Improbable	1	2	3	4	5	6	7	Probable

(3) Perceived of Control (5 items). Respondents were asked to: “Following, evaluate the items thinking of **how the doctors think and act on his work**. Use the seven-point scale ranging from “**Improbable**” = 1 to “**Probable**” = 7”. For example:

For your protection and the institution (hospital), most of the doctors using the FPIC as output.								
Improbable	1	2	3	4	5	6	7	Probable
The personal characteristic, the personality, seems to be the determining factor of humanizing conduct in the doctor-patient relationship.								
Improbable	1	2	3	4	5	6	7	Probable

(4) Behavioral Intention (5 items). Respondents were asked to: “Following, evaluate the items thinking of **how the doctors think and act on his work**. Use the seven-point scale ranging from “**Improbable**” = 1 to “**Probable**” = 7”. For example:

Always that the doctor acts humanely in the doctor-patient relationship, is because of his academic training.								
Improbable	1	2	3	4	5	6	7	Probable
For get guarantee the rights of the patients, the doctors use the FPIC as output.								
Improbable	1	2	3	4	5	6	7	Probable

## Procedures

The application of these instruments was performed in collective environment of the classroom, but the participants responded individually. In a first moment, the participants were informed about the anonymity and confidentiality of their responses, in which, was obtained the informed consent of all participants through the signing of a consent form. The voluntary nature of participation was guaranteed, as well as the respect for ethical guidelines that governing the research with human beings. The study was approved by the ethics committee of the Federal University of Alagoas. On average, the individuals completed their participation in 30 minutes.

## Data Analysis

By the software Statistic Package for Social Sciences (SPSS 18), we sought to assess the factorial validity and internal consistency of the *Scale of Attitudes toward the Term of Free, Prior and Informed Consent (FPIC) and the Humanization Process on Medical field*. Was checked the factorial adequacy of the correlations matrix of the items by the Kaiser-Meyer-Olkin

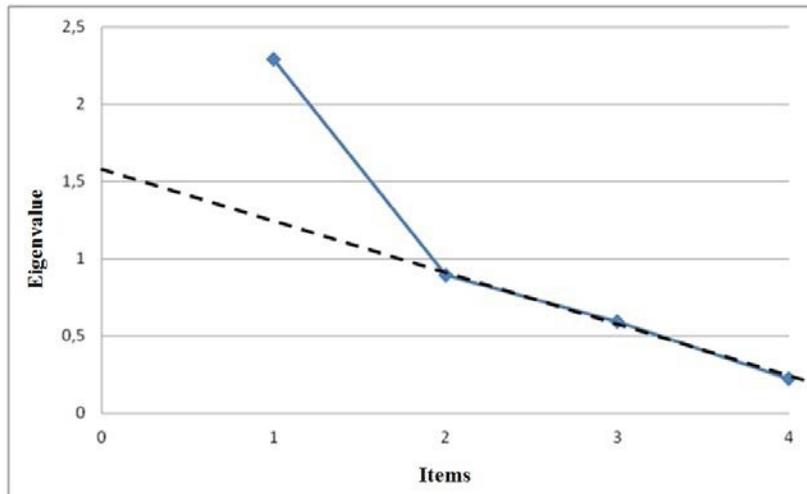
(KMO) and Bartlett's test for Sphericity - measures that verify the adequacy of the data to be subjected to factor analysis. Thus, we proceeded to an Exploratory Factor Analysis – determined to extract a factor –, in which was evaluated the unidimensionality of the constructs studied, because the analysis were performed by means of plots of items [for more details, see Little et al. (2002)]. After this step, was performed the calculation of internal consistency by the Cronbach's alpha technique. This is a statistical analysis of data from a single application of a test for a representative sample of individuals; it verifies the congruence of each item has with the remaining items of the same test (Pasquali, 2010). It is a measure that varies from 0 to 1, the value of 0.60 considered the lower limit of acceptability (Hair et al., 2006).

## RESULTS

In this section are presented the results for the Factorial Validity and Internal Consistency specifics of each one of the factors analyzed: Attitude, Subjective Norms, Perceived of Control and Behavioral Intention

### **Attitude: Factorial Validity and Internal Consistency**

Was conducted an analysis of principal components fixed in a factor. The initial statistics, Kaiser-Meyer-Olkin (KMO) = 0.65 and Bartlett's test for Sphericity,  $\chi^2 (10) = 217.49$ ;  $p = 0.000$ , both satisfactory, showed factorial adequacy of the correlation matrix between the items of scale. However, the item 5 not showed a factor loading  $\geq |0.30|$ . Thus, a new analysis of principal components was performed without this item, fixed in a factor. The initial statistics, Kaiser-Meyer-Olkin (KMO) = 0.67 and Bartlett's test for Sphericity,  $\chi^2 (6) = 211.08$ ;  $p = 0.000$ , both satisfactory, showed the factorial adequacy. It was possible to verify the feasibility of a component, taking into account the Kaiser criterion (Laros, 2005) – eigenvalue greater than or equal to 1 (Figure 2); the values were: 2.28, 0.89, 0.59 and 0.22. According to the graphical distribution (scree plot) of the eigenvalues (Figure 2), Cattell criterion (Laros, 2005), it was found the viability of retaining of a component above the dashed line. The results of this analysis are shown in Table 1.



**Figure 2.** Graphic distribution (scree plot) of the eigenvalues of the Attitude factor

It is observed in Table 1 that the component explains 57.23% of the total variance and the factor loadings ranging from 0.41 to 0.90. The component was interpreted from their 4 items, and showed internal consistency (Cronbach's alpha) of 0.71, being named *Attitude*.

**Table 1.** Principal component analysis

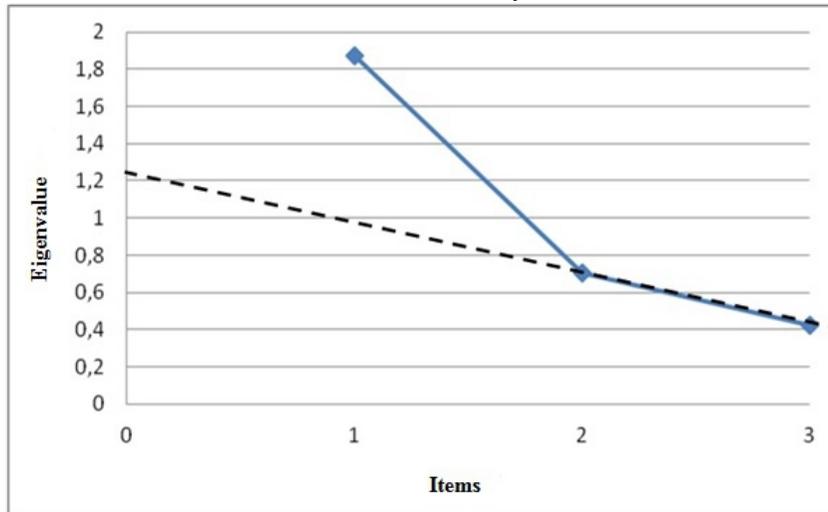
Description of Items	Component
To consider that the FPIC serves to guarantee the rights of the patient in procedures (e.g., hospitalization) is:	0.90
To believe that the FPIC serves to guarantee the rights of the patient in researches seems:	0.87
To believe that the FPIC serves to guarantee the protection of the doctor seems:	0.74
To believe that humanizing in the doctor-patient relationship depends of academic factors of the doctor seems:	0.41
<b>Number of items</b>	4
<b>Explained variance</b>	57.23
<b>Cronbach's Alpha</b>	0.71

Source: Research data.

### Subjective Norms: Factorial Validity and Internal Consistency

Was conducted an analysis of principal components fixed in a factor. The initial statistics, Kaiser-Meyer-Olkin (KMO) = 0.61 and Bartlett's test for Sphericity,  $\chi^2 (10) = 106.63$ ;  $p = 0.000$ , both satisfactory, showed factorial adequacy of the correlation matrix between the items of scale. However, the items 3 and 5 not showed a factor loading  $\geq |0.30|$ . Thus, a new analysis of principal components was performed without those items, fixed in a factor. The initial statistics, Kaiser-Meyer-Olkin (KMO) = 0.62 and Bartlett's test for Sphericity,  $\chi^2 (6) = 93.85$ ;  $p = 0.000$ , both satisfactory, showed the factorial adequacy. It was possible to verify the feasibility of a component,

taking into account the Kaiser criterion (Laros, 2005) – eigenvalue greater than or equal to 1 (Figure 3); the values were: 1.87, 0.70 and 0.42. According to the graphical distribution (scree plot) of the eigenvalues (Figure 3), Cattell criterion (Laros, 2005), it was found the viability of retaining of a component above the dashed line. The results of this analysis are shown in Table 2.



**Figure 3.** Graphic distribution (scree plot) of the eigenvalues of the Subjective Norms

It is observed in Table 2 that the component explains 62.42% of the total variance and the factor loadings ranging from 0.72 to 0.86. The component was interpreted from their 3 items, and showed internal consistency (Cronbach's alpha) of 0.69, being named Subjective Norms.

**Table 2.** Principal component analysis

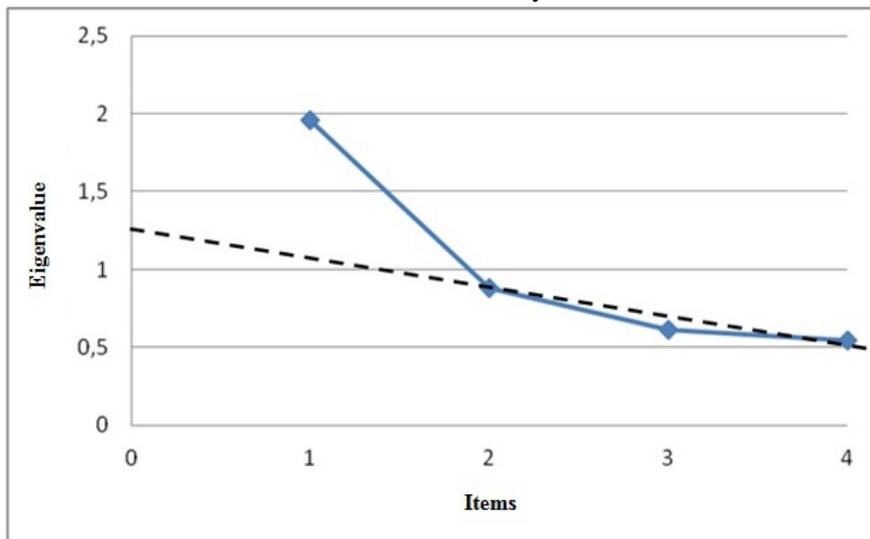
Description of Items	Component
The important people for me (friends, colleagues) approve that are needed changes in the medical education to improve the doctor-patient relationship.	0.86
The important people for me (friends, colleagues) approve that are needed changes in the courses of medicine to improve the understanding and use of FPIC.	0.78
The important people for me (friends, colleagues) consider the humanizing care as being dependent of academic factors of the doctor.	0.72
<b>Number of items</b>	3
<b>Explained variance</b>	62.42
<b>Cronbach's Alpha</b>	0.69

Source: Research data.

### **Perceived of Control: Factorial Validity and Internal Consistency**

Was conducted an analysis of principal components fixed in a factor. The initial statistics, Kaiser-Meyer-Olkin (KMO) = 0.66 and Bartlett's test for Sphericity,  $\chi^2(10) = 103.85$ ;  $p = 0.000$ , both satisfactory, showed factorial adequacy of the correlation matrix between the items of scale. However, the

item 3 not showed a factor loading  $\geq |0.30|$ . Thus, a new analysis of principal components was performed without this item, fixed in a factor. The initial statistics, Kaiser-Meyer-Olkin (KMO) = 0.68 and Bartlett’s test for Sphericity,  $\chi^2 (6) = 88.06$ ;  $p = 0.000$ , both satisfactory, showed the factorial adequacy. It was possible to verify the feasibility of a component, taking into account the Kaiser criterion (Laros, 2005) – eigenvalue greater than or equal to 1 (Figure 4); the values were: 1.96, 0.88, 0.61 and 0.54. According to the graphical distribution (scree plot) of the eigenvalues (Figure 4), Cattell criterion (Laros, 2005), it was found the viability of retaining of a component above the dashed line. The results of this analysis are shown in Table 3.



**Figure 4.** Graphic distribution (scree plot) of the eigenvalues of the Perceived of Control

It is observed in Table 3 that the component explains 48.99% of the total variance and the factor loadings ranging from 0.62 to 0.77. The component was interpreted from their 4 items, and showed internal consistency (Cronbach’s alpha) of 0.65, being named Perceived of Control.

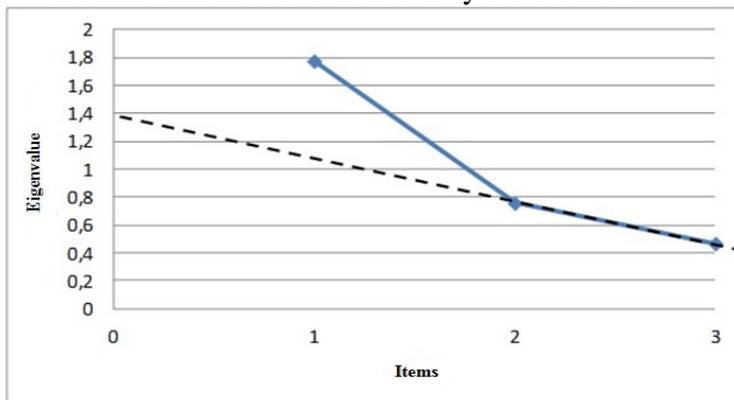
**Table 3.** Principal component analysis

Description of Items	Component
For your protection and the institution (hospital), most of the doctors using the FPIC as output.	0.77
The humanizing care and the use of FPIC to guarantee the doctor’s rights, it depends of the situation, in which he is inserted.	0.71
For guarantee the rights of patients, the doctors use the FPIC as output.	0.68
The personal characteristic, the personality, seems to be the determining factor of humanizing conduct in the doctor-patient relationship.	0.62
<b>Number of items</b>	4
<b>Explained variance</b>	48.99
<b>Cronbach’s Alpha</b>	0.65

Source: Research data.

### Behavioural Intention: Factorial Validity and Internal Consistency

Was conducted an analysis of principal components fixed in a factor. The initial statistics, Kaiser-Meyer-Olkin (KMO) = 0.58 and Bartlett’s test for Sphericity,  $\chi^2 (10) = 109.68$ ;  $p = 0.000$ , both satisfactory, showed factorial adequacy of the correlation matrix between the items of scale. However, the items 1 and 2 not showed a factor loading  $\geq |0.30|$ . Thus, a new analysis of principal components was performed without those items, fixed in a factor. The initial statistics, Kaiser-Meyer-Olkin (KMO) = 0.60 and Bartlett’s test for Sphericity,  $\chi^2 (6) = 75.07$ ;  $p = 0.000$ , both satisfactory, showed the factorial adequacy. It was possible to verify the feasibility of a component, taking into account the Kaiser criterion (Laros, 2005) – eigenvalue greater than or equal to 1 (Figure 5); the values were: 1.77, 0.75 and 0.46. According to the graphical distribution (scree plot) of the eigenvalues (Figure 5), Cattell criterion (Laros, 2005), it was found the viability of retaining of a component above the dashed line. The results of this analysis are shown in Table 4.



**Figure 5.** Graphic distribution (scree plot) of the eigenvalues of Behavioural Intention

It is observed in Table 4 that the component explains 59.20% of the total variance and the factor loadings ranging from 0.66 to 0.83. The component was interpreted from their 3 items, and showed internal consistency (Cronbach’s alpha) of 0.65, being named Behavioural Intention.

**Table 4.** Principal component analysis

Description of Items	Component
Always that the doctors can humanize their medical care, they do this by the use of FPIC for guarantee it.	0.83
For get guarantee the rights of the patients, the doctors use the FPIC as output.	0.79
Always that the doctor acts humanely in the doctor-patient relationship, is because of his academic training.	0.66
<b>Number of items</b>	3
<b>Explained variance</b>	59.20
<b>Cronbach’s Alpha</b>	0.65

Source: Research data.

## **DISCUSSION**

The results confirm that this scale of 14 items make an one-dimensional measure which reliably predicts Attitudes, Subjective Norms, Perceived of Control and Behavioural Intention in relation to the FPIC and the humanization process.

In empirical terms, we inferred that the instrument developed can be used as parameter for behavioural analyzes of several stakeholders involved in the area of health sciences, as students of medicine, nursing, nutrition, dental; medical internship in residence, and various professionals (doctors, dentists, nurses, nutritionists etc.). From this, it will be possible to identify the position of health professionals, especially Doctors, about the issue of FPIC and the humanization process, which has impulse so many discussions in the health sciences field. With the construction of a behavioural profile on the issue of FPIC and the humanization process, it will be possible to develop specific and targeted interventions to promote and encourage the use of FPIC and the humanization between doctors and patients.

In theoretical terms, we discuss that the Theory of Planned Behaviours helps significantly in the prediction of behaviour, establishing relationships between individual factors (cognitive) and social factors and information [or knowledge] (behavioural). Moreover, it encompasses the identification of human behaviour by measures of belief, attitude and intention, as previously discussed in the literature of this article. Thus, the instrument developed used of this theory to identify factors of Attitudes, Subjective Norms, Perceived Control and Behavioural Intention together in one measure for predicting behaviour.

## **FINAL CONSIDERATIONS**

The objectives of this article were develop and verify the factorial validity and internal consistency of the Scale of Attitudes toward the Term of Free, Prior and Informed Consent (FPIC) and the Humanization Process on Medical field, based on the Theory of Planned Behaviour. From this, we highlight that the goal had been reached once that was developed a measure which is theoretically grounded, empirically tested, and indeed parsimonious – since the scale has 14 precise items.

We also conclude that the components evaluated, even by means of plots of items, present evidence of factorial validity and internal consistency. With this, you can now use the total scores for each one of the components in the identification and comparison of different groups. Comparing groups, for example, men and women, you can see the relationship between the variables through correlation (e.g., Pearson's correlation) and level of explanation of the antecedent variables and the consequent variables. Thus,

we suggest that future research should adhere to these steps, contributing to the improvement of the instrument developed here.

In addition to these implications, it is understood that the development of this measure is an innovation in the Medical and Bioethics fields, and accordingly, the relevance of this work outlines on the possibility of improving and working the humanizing among students and health professionals in general.

### References:

- Ajzen I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckman (Eds.), *Action-control: From cognition to behavior* (pp. 11-39). Heidelberg: Springer.
- Ajzen I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Ajzen, I., & Fishbein, M. (2000). Attitudes and the attitude-behavior relation: Reasoned and automatic processes. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology* (pp. 1-33). New Jersey: John Wiley & Sons.
- Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. In D. Albarracín, B. T. Johnson & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 173-271). London: Lawrence Erlbaum Associates.
- Ajzen, I., & Madden, T. (1986). Prediction of goal-directed behavior: attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22(5), 453-74.
- Albarracin, D., Zanna, M. P., Johnson, B. T., & Kumkale, G. T. (2005). Attitudes: Introduction and scope. In D. Albarracin, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 3-19). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Allport, G. W. (1935). Attitudes. In C. Murchison (Ed). *Handbook of social psychology*. Worcester, Mass: Clark University Press
- Bamberg, S., Ajzen, I., & Schmidt, P. (2003). Choice of travel mode in the theory of planned behavior: The roles of past behavior, habit, and reasoned action. *Basic and Applied Social Psychology*, 25(3), 175-188.
- Bamberg, S., & Möser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *Journal of Environmental Psychology*, 27, 14-25.
- Bazon, F. V. M., Campnelli, E. A., & Assis, S. M. B. (2004). A importância da humanização profissional no diagnóstico das deficiências. *Psicologia: Teoria e Prática*, 6(2), 89-9.
- Benevides, R. (2005). Passos. *Interface - Comunic Saúde Educ*, 9(17), 389-406.

- Bogardus, E. S. (1933). Social distance scale. *Sociological Research*, 17, 265-271.
- Brasil. Constituição Brasileira, 1988. [Online] Available at: [www.planalto.gov.br/ccivil\\_03/constituicao/constituicao.htm](http://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm). [Accessed: Sep. 16, 2013]
- Brasil. Diretrizes para a graduação em medicina 2001. [Online] Available at: [portal.mec.gov.br/cne/arquivos/pdf/CES04.pdf](http://portal.mec.gov.br/cne/arquivos/pdf/CES04.pdf). [Accessed: Sep. 16, 2013]
- Campos, G. W. S. (2006). *A saúde pública e a defesa da vida*. São Paulo: Hucitec.
- Cantril, H. (1934). The roles of the situation and adrenalin in the induction of emotion. *The American Journal of Psychology*, 46, 568-579.
- Corral-Verdugo, V. (2001). *Comportamiento proambiental: Una introducción al estudio de las conductas protectoras del ambiente*. Santa Cruz de Tenerife, México: Editorial Resma, S. L.
- Crowne, D., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, 24, 349-354.
- Davis, L. E., Ajzen, I., Saunders, J., & Williams, T. (2002). The decision of African American students to complete high school: An application of the theory of planned behavior. *Journal of Educational Psychology*, 94(4), 810-819.
- Decache, A., & Ballekon, V. K. (2010). From patient compliance to empowerment and consumer's choice: evolution or regression? An overview of patient education in French speaking European countries. *Patient Educ Couns*, 78(3), 282-287.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth: Harcourt Brace Jovanovich.
- Eagly, A. H., & Chaiken, S. (1998). Attitudes structure and function. In D. T. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 1, pp. 269-322). New York: McGraw-Hill.
- Fabrigar, L. R., MacDonald, T. K., & Wegener, D. T. (2005). The origin and structure of attitudes. In D. Albarracin, B. T. Johnson, & M. P. Zanna (Eds.), *Handbook of attitudes and attitude change* (pp. 79-124). Mahwah, NJ: Erlbaum.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Furnham, A. (1986). Response bias, social desirability and dissimulation. *Personality and Individual Differences*, 7, 385- 400.
- Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, 102, 4-27.

- Greenwald, A. G., McGhee, D. E. & Schwartz, L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology*, 74, 1464-1480.
- Hair, J. F. Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (2006). *Análise multivariada*. Porto Alegre: Bookman.
- Herek, G. M. (1986). The instrumentality of attitudes: Toward a neofunctional theory. *Journal of Social Issues*, 42, 99-114.
- Katz, D. (1960). The functional approach to the study of attitudes. *Public Opinion Quarterly*, 24, 163-204.
- Krosnick, J. A., Judd, C. M., & Wittenbrink, B. (2005). The Measurement of Attitudes. In D. Albarracín, B. T. Johnson & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 21-76). London: Lawrence Erlbaum Associates.
- Kuntz, P. R., & Fernquist, R. M. (1989). Opinion on abortion as measured by the lost-letter technique. *Psychological Reports*, 65, 1343-1346.
- Laros, J. A. (2005). O uso da análise fatorial: Algumas diretrizes para pesquisadores. In L. Pasquali (Org.), *Análise fatorial para pesquisadores* (pp. 163-184). Brasília, DF: LabPAM.
- Lima, L. P. (2002). Atitudes: estrutura e mudança. In J. Vala & M. B. Monteiro (Orgs.), *Psicologia social* (pp. 187-225). Lisboa: Fundação Calouste Gulbekian.
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question and weighing the merits. *Structural Equation Modeling*, 9, 151-173.
- Madden, T. J., Ellen, P. S., & Ajzen, I. (1992). A comparison of the theory of planned behavior and the theory of reasoned action. *Personality and Social Psychology Bulletin*, 18, 3-9.
- Maio, G. R., & Olson, J. (1995). Relations between values, attitudes, and behavioral intentions: The moderating role of attitude function. *Journal of Experimental Social Psychology*, 31, 266-285.
- Medeiros, E. D. de, Gouveia, V. V., Pimentel, C. E., Soares, A. K. S., & Lima, T. J. S. (2010). Escala de atitudes frente à tatuagem: elaboração e evidências de validade e precisão. *Estudos de Psicologia*, 27(2), 177-186.
- Mehrabian, A. (1968). Inference of attitudes from the posture, orientation and distance of a communicator. *Journal of Consulting and Clinical Psychology*, 32, 296-308.
- Milfont, T. L. (2007). *Psychology of environmental attitudes: A cross-cultural study of their content and structure*. Thesis (PhD in Environmental Psychology) – University of Auckland, Auckland, New Zealand.
- Milgram, S. L., Mann, L., & Hartner, S. (1965). The lost letter technique: A tool of social science research. *Public Opinion Quarterly*, 29, 437-438.
- Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1957). *The measurement of meaning*. Urbana, ILL: University of Illinois Press.

- Pasquali, L. (2010). Escalas psicométricas. In L. Pasquali (Org.), *Instrumentação psicológica: fundamentos e práticas* (pp. 116-135). Porto Alegre: Artmed.
- Paulhus, D. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17-60). San Diego, CA: Academic Press.
- Petty, R. E., & Cacioppo, J. T. (1996). Addressing disturbing and disturbed consumer behavior: Is it necessary to change the way we conduct behavioral science. *Journal of Marketing Research*, 33, 1-8.
- Rodrigues, A., Assmar, E. M. L., & Jablonski, B. (2000). *Psicologia social*. Petrópolis, RJ: Vozes.
- Rokeach, M. (1973). *The nature of human values*. New York: Free Press.
- Rokeach, M. (1981). *Crenças, atitudes e valores*. Rio de Janeiro: Interciência.
- Rosenberg, M. J., & Hovland, C. I. (1960). Cognitive, affective and behavioral components of attitudes. In M. J. Rosenberg & C. I. Hovland (eds.), *Attitude organization and change: An analysis of consistency among attitude components*. New Haven: Yale University Press.
- Rye, B. J., Fisher, W. A., & Fisher, J. D. (2001). The theory of planned behavior and safer sex behaviors of gay men. *AIDS and Behavior*, 5(4), 307-317.
- Schultz, P. W. (2001). The structure of environmental concern: Concern for self, other people, and the biosphere. *Journal of Environmental Psychology*, 21, 327-339.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. P. Zanna (Org.), *Advances in experimental social psychology* (pp. 1-65). Nova York: Academic Press.
- Smith, M. B., Bruner, J. S., & White, R. W. (1956). *Opinions and personality*. New York: Wiley.
- Tesser A., & Shaffer D. R. (1990). Attitudes and attitude change. *Annual Review of Psychology*, 41, 479-523.
- Thomas, W. I., & Znaniecki, F. (1918). *The Polish Peasant in Europe and America*. Boston: Badger.
- Trabucchi, M. (2006). Il medico e la sua personale sofferanza: possibili ricadute sull'organizzazione dei servizi sanitari. *Tendenze Nuove*, 2, 115-124.
- Zajonc, R. B., & Markus, H. (1982). Affective and cognitive factors in preferences. *Journal of Consumer Research*, 9, 123-131.